

National Grid 3-1

Request:

Reference the Direct Testimony of Roxie McCullar at page 2, lines 7-8. Please provide all of Ms. McCullar's notes from the field visits she conducted on March 1, 2018. Please also provide all photographs from Ms. McCullar's field visits.

Response:

Objection: Ms. McCullar's notes are privileged materials and work product prepared in anticipation of litigation.

Subject to and without waiving the above objection, below are Ms. McCullar's notes.

Additionally, the pictures taken by Ms. McCullar during the March 1, 2018 field visit are being provided on a separate CD.

Prepared by Roxie McCullar

Field Visit March 1, 2018

South Street Substation (360 Eddy Street, Providence, RI)

Keith Burgoyne, Lead Supervisor, Operations Underground Providence, Branch Operations Coordinator

The old South Street Substation is attached to the old coal plant that was sold and is now a nursing school Brown University

The new substation is next door by end of 2019

They will tear down the old substation building.

The old substation has 3 transformers and 4 subtransmission transformers

The plan is to retire 2 of the transformers and keep one transformer as a spare, retire 3 (or 2?) of the subtransmission transformers and repurpose 1 (or 2?)

About a block away is the old Manchester coal plant was converted to natural gas and is owned by Dominion.

Next to the Manchester plant is the Franklin Square substation and the Pointe Street substation.

Franklin Square is a 115 kV to 1100 kV

Pointe Street is a 115 kV to 12.47 kV to serve industrial customers

Near the bridge by the substation the company is taking down the overhead transmission lines and replacing with underground transmission lines

The T1 transmission from the Franklin substation is underground ducts to the South Street substation.

The company added fill to the South Street substation to raise the ground level so they could bury new ducts over the existing ducts.

The conduit was installed using jack and bore method 80 ft at a time.

Inside new South Street Substation Building.

Three floors. Have three similar sections, red, white and blue

National Grid does most of the substation work with inhouse crews

Need reactors to get volts and amps in line

Two different types of dash 3, one type for lines that went through reactor and one for lines that do not need the reactor

Flow: Breaker to Reactor to Dash 3 to field

Inside old South Street Substation Building

The old power plant next door has 1921 on the building, that building is now a nursing school

The substation building has 1919 on the building which will be torn down

The building will be torn down after new substation next to the current one goes into service in 2019

200 Grotto St, Providence, RI (off Blackstone Blvd)

Keith Burgoyne, Lead Supervisor, Operations Underground Providence, Branch Operations Coordinator

John Kenney, on-site National Grid supervisor

Pole replacement. Removing 1980's vintage pole and adding a transformer and a taller pole to pull a primary line down the road.

They were hand digging hole for new pole next to retiring pole due to riser services underground near the pole.

The hole for pole is 10% of pole plus 2 ft, so digging 6 ft for the new 40 ft pole.

The city will move the street light to new pole. National Grid will take light down if it is in the way.

New pole is treated south yellow pine and will last at least 50 years

When onsite noticed a pole that needed replaced.

And while onsite a customer with a house under construction asked about having a pole moved away from bedroom window. The company is planning on replacing the transformer on that pole due to rusting

For joint poles, National Grid and Verizon share ownership. National Grid pays for installation and Verizon pays to remove the pole.

The company uses fiberglass poles for backyard installation since 4 guys can carry pole and then use the backyard machine

They are using fiberglass in the cross arms at dead ends, can handle the tension better than wood cross arms

Most of the replacement and emergency electric work is done with inhouse crews

Most underground electric services are in conduit

453 Greenville Ave, Johnston, RI

Robert Obi-Tabot "Obi", Manager – Construction/Contractor Oversight NE South

Carlos Silva, on-site National Grid supervisor

Project to replace 6 inch bare steel with 8 inch plastic

The company just laid new plastic down Greenville and now doing the mains down the side streets

Will cut and cap the bare steel after connected to new plastic

Replacing services if they are bare steel.

Started doing plastic in the 80's. will need to replace Aldyl-A plastic due to brittle pipe

Laying new mains parallel to old bare steel

They replace the meters every 7 years.

Use outsider contractors for 80% of the work. Use AGI and JPL contractors.

AGI contractor did most work on this site.

The National Grid inhouse crews work with live gas work

The company has a rider replacing 60 miles of cast iron and bare steel. In the third year of a 20 year project.

700 Newport Ave, Pawtucket, RI

Robert Obi-Tabot "Obi", Manager – Construction/Contractor Oversight NE South

Mike Dowds (sp), on-site National Grid supervisor

Had some leaking issues during the cold snap at end of 2017 to 2018. Frost was 48 inches down

Project is replacing cast iron with 6 inch plastic. The cast iron has a joint every 12 ft, the plastic as joint every 40 ft.

Placing new services using a hog

Right now both sides of road have cast iron main. The new plastic is replacing both, so now some services are on the long side. The cast iron was 6 inch and 4 inch on each side of the road

Replaced two bare steel services that day. The retiring was 1948 and 1951 vintages.

The new plastic is 1 ¼ inch since the area is 7-10 psi

The CMS department goes house to house for approval to move the meter per Rhode Island law

Will be removing the old curb boxes and least 4 feet down after new line in service

National Grid 3-2

Request:

Reference the Direct Testimony of Roxie McCullar at page 7, lines 5-6, and footnote 10.

- a. Please confirm that Definition 37 in 18 CFR Part 101 is for “service value”, not “salvage value.”
- b. Please confirm that “salvage value” in Definition 35 of 18 CFR Part 101 is defined as “the amount received for property retired, less any expenses incurred in connection with the sale or in preparing the property for sale; or, if retained, the amount at which the material recoverable is chargeable to materials and supplies, or other appropriate account.”

Response:

- a. Confirmed. The testimony on page 7, lines 5-6 mistakenly included the FERC USOA definition for “service value” instead of “salvage value”.
- b. Confirmed. That is the definition of “salvage value” as provided in FERC USOA.

Prepared by Roxie McCullar

National Grid 3-3

Request:

Reference the Direct Testimony of Roxie McCullar at page 11, lines 12-14. Ms. McCullar states that the method cited in Wolf and Fitch “discusses a method that first converts ‘the observed dollars to constant dollars’ which removes the high historic inflation rates, and then use a more reasonable estimate of the inflation.” The second footnote in this passage is a citation to page 265 of Wolf and Fitch. Please provide citations to the specific language on this page of Wolf and Fitch that supports Ms. McCullar’s statement, “use a more reasonable estimate of the inflation.”

Response:

The first full paragraph on page 265 of Wolf and Fitch’s *Depreciation Systems* discusses the use of a constant per year inflation rate that differs from the historic inflation rates, as discussed in this section of Ms. McCullar’s testimony.

There is also discussion regarding using inflation rates that are different than the historic inflation rate in the calculation of the net salvage ratio on pages 53-55 of Wolf and Fitch’s *Depreciation Systems*. For example, page 54 regarding the use of inflation rates that differ from the historic inflation rate states: “Notice that if the inflation rate does not change, then the salvage remains unchanged regardless of the life. But if the inflation rate increases, the salvage ratio increases.” and goes on to point out: “If a similar table is constructed using future inflation rates that are equal to or less than the inflation rate during the life of the first unit, then the salvage ratios will be equal to or less than the 10% ratio experienced by the first unit.” That section of Wolf and Fitch’s *Depreciation Systems* concludes on page 55: “Recognition of the effect of inflation on salvage will influence the analysis and forecasting of salvage. To find the effect of inflation, it is necessary to understand and calculate the time value of money.”

Prepared by Roxie McCullar

National Grid 3-4

Request:

Reference Direct Testimony of Roxie McCullar at page 12, lines 1-4, which states, “[o]nce the salvage amounts are stated at the same price level of the retired plant, and the impact of the high historic inflation levels have been removed, the next step is to use a more reasonable estimate of inflation to aid in forecasting the future net salvage amounts.”

- a. Ms. McCullar cites page 265 of Wolf and Fitch in support of this statement. In the instructions on page 265 of Wolf and Fitch, the text references Table 14.6, which is shown on page 272 of Wolf and Fitch. Please identify where in Ms. McCullar’s testimony or workpapers she constructed a table similar to Table 14.6 for each vintage of plant for each account for which Ms. McCullar has made a different net salvage recommendation from that of the Company. If Ms. McCullar did not construct tables similar to Table 14.6, please state so and explain why not.
- b. Ms. McCullar cites page 265 of Wolf and Fitch in support of this statement. In the instructions on page 265 of Wolf and Fitch, the text references Table 6.11 from Chapter 6, which can be found on page 163 of Wolf and Fitch. Please identify where in Ms. McCullar’s testimony or workpapers she constructed a table similar to Table 6.11 for each account for which Ms. McCullar has made a different net salvage recommendation from that of the Company. If Ms. McCullar did not construct tables similar to Table 6.11, please state so and explain why not.

Response:

- a. Table 14.6 of Wolf and Fitch’s *Depreciation Systems* is not relevant to the analysis of the historic salvage. Ms. McCullar’s testimony in this section is specifically regarding the high inflation rates included in the historic net salvage ratio. Table 14.6 is showing one method of calculating a future net salvage percent. As stated on page 13, lines 9-13 of Ms. McCullar’s testimony, the inflation adjusted historic net salvage is not the only piece of information Ms. McCullar considered regarding her proposed future net salvage percent.

For the tables used, please see Excel files “RMM-5 (Acct 376-Salvage)”, “RMM-8 (Acct 380-Salvage)” and “RMM-10 (Acct 368-Salvage)” provided in response to National Grid request 1-21.

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- b. Table 6.11 of Wolf and Fitch's *Depreciation Systems* is a method of calculating the average future net salvage. Ms. McCullar's testimony in the quoted section is discussing the analysis of the actual historic net salvage amounts, so Table 6.11 of Wolf and Fitch's *Depreciation Systems* is not relevant in the analysis of the historic salvage.

For the tables used, please see Excel files "RMM-5 (Acct 376-Salvage)", "RMM-8 (Acct 380-Salvage)" and "RMM-10 (Acct 368-Salvage)" provided in response to National Grid request 1-21.

Prepared by Roxie McCullar

National Grid 3-5

Request:

Reference Schedule RMM-5 of the Direct Testimony of Roxie McCullar.

- a. Please provide a detailed, step-by-step narrative explaining how the values for Cost of Removal in Column C are calculated. The response should explain in detail how the amounts in Column C are derived from the amounts shown on page VIII-8 of Schedule NWA-2- Gas, and should specify all inflation rates or factors used in the calculations, as well as all time periods used in the calculations.
- b. For each calculation step identified in the response to part a., please provide citation(s) to Wolf and Fitch that support the calculation step.
- c. Please provide the same information as provided in the response to part a. for the amounts shown in Column E.
- d. Please provide the same narrative information as provided in the responses to parts a. and c. for Schedules RMM-8 and RMM-10.

Response:

a-d. Page 11, line 10 to page 13, line 4 of Ms. McCullar's testimony discusses the steps and inflation rate used in the calculations of the adjusted historic net salvage ratio as shown in Column C and E of Schedules RMM-5, RMM-8, and RMM-10, with references to the specific pages in Wolf and Fitch's *Depreciation Systems*. Please see the Excel files "RMM-5 (Acct 376-Salvage)", "RMM-8 (Acct 380-Salvage)" and "RMM-10 (Acct 368-Salvage)" with formulas intact provided in response to National Grid request 1-21.

As stated on page 263 of Wolf and Fitch's *Depreciation Systems*, the first step is to deflate the actual net salvage amounts to the year the related retired plant was first installed. This deflation removes the impact of inflation on the years since the asset was installed. This deflation is done using the CPI-U provided in Schedule RMM-3.

However, since the historic net salvage amounts shown in Section VIII of Schedule NWA-2 and provided in response to DIV 1-27-1 are a total net salvage amount by transaction year, these total net salvage amounts need to be allocated to the installation years using the related retirement amounts by vintage provided in response to DIV 1-26-1. To perform this allocation of the total annual net salvage amounts, the by vintage retirement amounts need to be converted to constant dollar amounts using the CPI-U provided in Schedule RMM-3. This allocation of the total annual net salvage amount by

the per vintage retirement amounts in constant dollars is described on page 266 of Wolf and Fitch's *Depreciation Systems*. For the workpaper see tab "Retirements 1983" and tab "Allocated NS 1983" in the Excel files provided in response to National Grid request 1-21.

Once the total annual net salvage amounts are allocated to installation year, the allocated net salvage amounts are then deflated from retirement year dollars to install year dollars using the CPI-U as described on page 263 of Wolf and Fitch's *Depreciation Systems*. For the workpaper see tab "NS at Install Yr" in the Excel files provided in response to National Grid request 1-21.

Once the impact of the high historic inflation has been removed, the next step is to use a more reasonable level of annual inflation to provide an analysis of the historic data. This step is done by using the 2% inflation rate the Federal Open Market Committee ("FOMC"), which is a key entity of the Federal Reserve System has determined to be the longer-run goal for inflation and has been the average rate of inflation for at least the last 20 years. The 2% inflation rate is in the reinflation of the net salvage amounts from the install year as calculated in the previous step to the year of retirement. For the workpaper see tab "NS 2% from Install Yr" in the Excel files provided in response to National Grid request 1-21.

The amounts in column (G) of Schedules RMM-5, RMM-8, and RMM-10 are calculated using the steps discussed above. The amounts in columns (C) and (E) of Schedules RMM-5, RMM-8, and RMM-10 are in the same ratio of the cost of removal amounts, salvage amounts, and net salvage amounts in Section VIII of Schedule NWA-2. For the workpaper see tab "NS 2% from Constant" in the Excel files provided in response to National Grid request 1-21.

The difference between of the amounts in columns (C), (E), and (G) of Schedules RMM-5, RMM-8, and RMM-10 and the amounts shown in the cost of removal amounts, salvage amounts, and net salvage amounts Section VIII of Schedule NWA-2, is that the amounts in Section VIII of Schedule NWA-2 include the high historic rate of inflation and the amounts in Schedules RMM-5, RMM-8, and RMM-10 use a more reasonable 2% annual inflation rate.

As stated on page 10, lines 9-13 of Ms. McCullar's testimony, the adjusted historic net salvage ratio analysis to remove the historic high inflation is one of the factors considered in determining the future net salvage parameter proposed in Ms. McCullar's testimony.

National Grid 3-6

Request:

Reference the Direct Testimony of Roxie McCullar at page 11, lines 12-14 and Schedules RMM-5, RMM-8 and RMM-10.

- a. Is Ms. McCullar aware of any other utility cases (in any jurisdiction) in which Ms. McCullar or another witness made a proposal to use the same net salvage analysis Ms. McCullar has proposed in the instant case (i.e., using the same net salvage analysis shown in Schedules RMM-5, RMM-8 and RMM-10, which “removes the high historic inflation rates, and then use[s] a more reasonable estimate of the inflation”).
- b. If the response to part a. is yes, please provide a listing of the most recent five cases in which such a proposal was made, including the company, jurisdiction and docket number.
- c. If the response to part a. is yes, were the proposals to use the same net salvage analysis as Ms. McCullar used in the current case accepted or rejected? Please provide the orders or decisions in each case listed in part b. and any other information to support the response.

Response:

Objection: This request is overly broad. Identifying the net salvage method accepted in every jurisdiction would require a special study that Ms. McCullar has not conducted.

Subject to and without waiving the above objection, below are jurisdictions and orders Ms. McCullar is aware that the level of inflation assumed in the net salvage amounts has been addressed in Commission Orders.

- Connecticut Docket No. 16-06-04. In the December 14, 2016 Commission “Decision” the Commission accepted net salvage depreciation rates that produced “an annual accrual that is 1.2 times the annual incurred distribution plant net salvage costs” stating that the “distribution net salvage depreciation rates still comfortably cover the actual incurred net salvage costs.” (p. 46 of the December 14, 2016 “Decision”).
- District of Columbia Formal Case No. 1076. In Order No. 15710 regarding inflation included in the Company’s proposed future net salvage amounts that Commission stated: “Fairness and equity require that the Commission adopt a methodology that, to the extent

possible, balances the interest of current and future ratepayers.” And went on to state: “Pepco should not be allowed to charge current customers for future inflation, nor should Pepco be allowed to charge current customers in higher-value current dollars for a future cost of removal amount that is calculated in lower-value future dollars.” (paragraph 252 of Order No. 15710).

- Maryland Case No. 9092. In Order No. 81517 the Commission stated: “The Commission has carefully reviewed the record and finds that the Present Value Method should be adopted for the recovery of removal costs. The Straight Line Method recovers the same annual cost in nominal dollars from ratepayers today as it does at the time plant is removed from service. However, a dollar is worth substantially more today than it will be 20 to 40 years from now. Consequently, today’s ratepayers would pay more in “real” dollars under the Straight Line Method for the recovery costs of the plant they consume than would future ratepayers when net salvage is negative, as everyone projects.” (page 30 of Order No. 81517).
- New Jersey Docket No. ER02080506. In the May 17, 2004 Final Order the Board found: “As a result of this data and the underlying concept of FASB 143 as discussed in this matter, the Board FINDS it appropriate to revisit the concept of including estimated future net salvage in current depreciation rates. The Board HEREBY FINDS the recommendation of the Ratepayer Advocate and Staff to exclude estimated net salvage from depreciation rates to be appropriate. The Board FURTHER FINDS that the Ratepayer Advocate and Staff's proposed utilization of a five-year average of actual salvage expense in depreciation expense is reasonable as it more closely aligns the amount recovered in base rates with the historical level of expenses incurred. The Board concurs with Staff that the ten-year window of actual experience rather than the five-year rolling average proposed by the Ratepayer Advocate is appropriate.” (page 129-130 of the May 14, 2004 Final Order).
- Pennsylvania, Superior Court of Pennsylvania in Penn Sheraton Hotel v. Pennsylvania Public Utility Commission. The court found: “Negative salvage attributed to existing plant is purely prospective; it is a cost which has not yet been incurred; it is uncertain when and if it will be incurred; and it is not a part of the original cost of construction of the facilities when first devoted to public service. To permit the recovery of prospective negative salvage is to permit the recovery of a total amount in excess of the original cost of construction prior to the actual expenditure of those costs and, in our opinion, represents the recovery of something in the nature of a future reproduction cost. The established law in this Commonwealth does not permit the recovery by annual depreciation of any such prospective excess. It is therefore the prospective nature of future negative salvage that prevents it from being considered either in accrued depreciation or in the allowance for annual depreciation; they must have a consistent basis under our law. Although prospective negative salvage is not entitled to consideration, the negative salvage actually incurred by the utility either upon the actual retirement of a property without replacement or upon the replacement of an item of property is of course entitled to consideration in a rate proceeding. It is then no longer prospective but actual. If the utility retires and removes a property without replacing it or replaces it after removal and incurs actual negative salvage in doing so, the expenditure

should be capitalized and amortized by some reasonable method and for and over a reasonable length of time.”

- Michigan Case No. U-15629. In the September 29, 2009 “Opinion and Order”, the Commission rejected a present-value future net salvage proposal stating: “The Commission agrees with Consumers and the Staff that continued use of the traditional, straight-line depreciation method, coupled with the use of the Staff’s proposed SRUs on a going-forward basis, is the most appropriate means of addressing future removal costs.” (page 12 of the September 29, 2009 “Opinion and Order”)

Additionally, Ms. McCullar is aware of a recent testimony by a utility consultant explaining how he adjusted for the high historic inflation included in the historic net salvage ratios, as discussed in the 12/13/17 Hearing Transcript in Maine Docket No. 2017-00065.

“MR. NORMAND: Okay, so if you look at the last three numbers, 2016, '15, and '14, those averages 230 percent. And as I was saying, that's referencing retired plan, which is old, against current cost. So that gives you a number, and you say, well, I have to adjust that number because I can't really use these numbers are very large. So, for this account, I -- I look more at the five-year average on the right, and what I did is I took 50 percent -- roughly 50 percent, and my recommendation for this account was a 30 percent net salvage. And so, what happens is I tried to discount the huge, large numbers to the left, but at the same time, you have to come up with a net salvage that reflects, as best you can, the information you have, while at the same time trying to remove a lot of the inflation factor, but retaining some of the inflation. So, the 30 percent, what I typically do is look at the five-year groupings on the right, and the last three years and I will try to make recommendations that are between a third to a half of what I see. That typically will eliminate most of the inflation.”¹ (Emphasis added.)

Prepared by Roxie McCullar

¹ Starting on page 13, line 10, of the 12/13/17 Transcript in Maine Docket No. 2017-00065.

National Grid 3-7

Request:

Reference the Direct Testimony of Roxie McCullar at page 13, lines 9-13. Ms. McCullar states that she considered “the average actual net salvage expense incurred over the most recent time periods” in recommending her future net salvage estimates. Please explain in detail how “the average actual net salvage expense” was factored into Ms. McCullar’s net salvage estimates.

Response:

The average actual net salvage expense incurred over the most recent time periods was not “factored” into any calculation done by Ms. McCullar. As stated in Ms. McCullar’s testimony, she considered the average actual net salvage expense incurred over the most recent time periods.

Ms. McCullar considered the proposed annual accruals for net salvage compared to the average actual net salvage expense incurred over the most recent 5-year period. Ms. McCullar’s proposed future net salvage accruals cover the current average annual net salvage costs and build the reserve for net salvage expenses related to future retirements.

The table below compares the average actual net salvage expense incurred over the most recent 5-year period and the net salvage annual accrual included in National Grid’s and the Division’s proposed depreciation rates.

Prepared by Roxie McCullar